3°)

$t = 0 : A_0 = 400Bq$

$t = T : A = \frac{A_0}{2} = 200Bq$

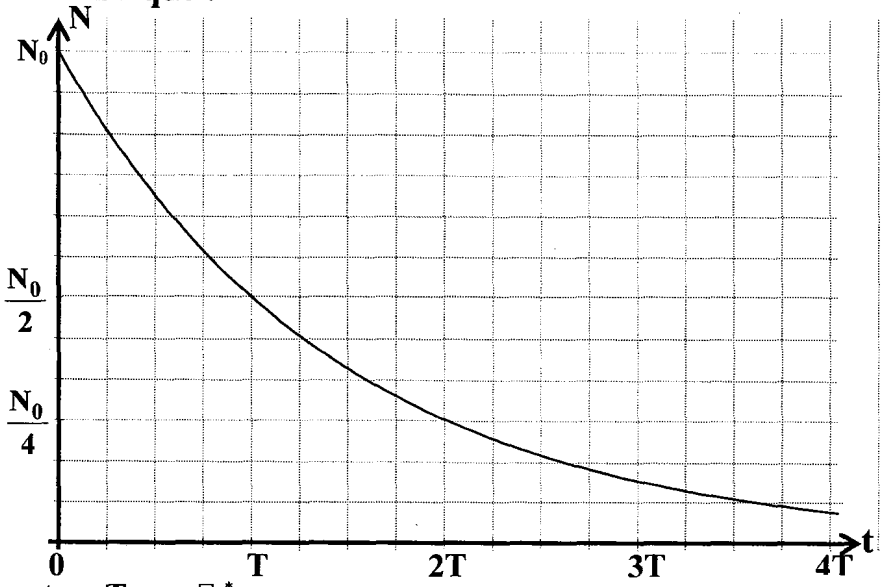
d'après la courbe $T = 200s \Rightarrow \lambda = \frac{Ln(2)}{200} = 3,46.10^{-3}s^{-1}$

4°) $A = A_0 e^{-\lambda t}$

à t_1 : $A = 400.e^{-3,4610^{-3}.1000} = 12,57Bq \Rightarrow N = \frac{A}{\lambda} = 3,685.10^4$

Ou bien : $t_1 = 1000s = 5T : A = \frac{A_0}{2^5} = \frac{400}{2^5} = 12,5Bq$

Remarque :



$t = nT \quad n \in \mathbb{N}^*$

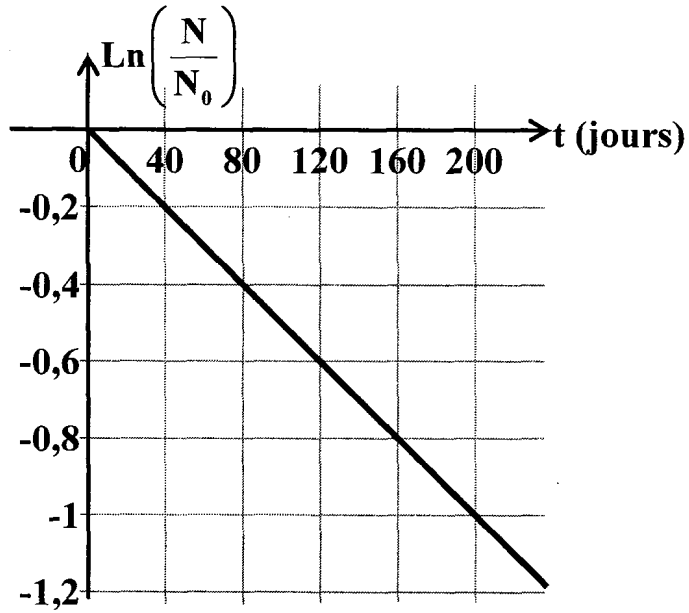
$N = \frac{N_0}{2^n}$

Exercice N°6 :

1°)

a-

t(jours)	0	40	80	120	160	200
$Ln\left(\frac{N}{Nc}\right)$	0	-0,19	-0,4	-0,59	-0,79	-1



b-Expression Théorique

$N = N_0 e^{-\lambda t} \Rightarrow \frac{N}{N_0} = e^{-\lambda t} \Rightarrow L_n\left(\frac{N}{N_0}\right) = -\lambda t$

Etude expérimentale $Ln\left(\frac{N}{N_0}\right)$ est un segment de droite